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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,775	01/23/2002	John Gruber	2545-000022	6246

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EXAMINER
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LEUNG, CHRISTINA Y

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/054,775	Applicant(s) GRUBER ET AL.	
	Examiner Christina Y. Leung	Art Unit 2633	<i>AL</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2002.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-16, 18 and 19 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6-20-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because elements in the drawings should have descriptive as well as numeric labels. Many of the elements in the figures are currently represented by darkened or black boxes, which may have been an unintentional result of the photocopying of Applicants' originally produced drawings; these black boxes currently have no readable corresponding descriptive label.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2633

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 2 recites the limitation "routing the first portioned multiplexed signal to the network switching site" in lines 4 and 5 of the claim. There is insufficient antecedent basis for this limitation in the claim, since claim 1 on which claim 2 depends does not previously recite a "network switching site." Based on Applicants' figures and specification, Examiner notes that the method of claim 2 may include a step of routing the first portioned multiplexed signal to the optical signal combiner recited in claim 1 instead.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Milton et al. (US 6,084,694 A).

Regarding claim 17. Milton et al. disclose an agile switching node in an optical transport network (Figures 1 and 4), comprising:

Art Unit: 2633

a first optical transport line (i.e., fiber 2 in Figure 4) operable to carry an optical multiplexed signal therein, where the optical multiplexed signal having a plurality of data signals and at least one of the data signals being agile;

a demultiplexer (the band filter 10 on the left side of Figure 4 that receives the multiplexed signal from fiber 2) adapted to receive the optical multiplexed signal and separate the optical multiplexed signal into a plurality of data signals (column 4, lines 63-667; column 5, lines 9);

a photonic switch (optical cross-connect 115) adapted to receive the agile data signals from the demultiplexer and operable to switch the agile data signals (column 5, lines 58-65); and

a multiplexer (the band filter 10 on the right side of Figure 4) adapted to receive data signals from the photonic switch 115 and the demultiplexer 10, and operable to combine the data signals to form an outgoing multiplexed signal.

Examiner notes that Figure 4 also shows further band filters 10 connected to another fiber (one that is shown in Figure 4 as transmitting signals from right to left), but the fibers and band filters 10 referred to above are the ones related to the signals transmitted left-to-right in Figure 4.

7. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Morthier (US 6,678,473 B1).

Regarding claim 1, Morthier discloses a method at a network switching node in an optical transport network (Figures 1 and 4A), the network switching node (shown in Figure 4A) having an input and an output, comprising:

Art Unit: 2633

providing an optical signal splitter 21-1 at the input of the network switching node, the signal splitter adapted to receive an optical multiplexed signal having a plurality of data signals and at least one data signal being agile;

providing an optical signal combiner 22-1 at the output of the network switching node;  
and

introducing a photonic cross-connect switch 13 between the signal splitter and the signal combiner, where the photonic switch is operable to switch the agile data signals (column 12, lines 14-48).

Regarding claim 2, as well as the claim may be understood with respect to 35 U.S.C. 112 discussed above, Morthier discloses:

splitting the optical multiplexed signal into a first and a second partitioned multiplexed signal (splitter 21-1 splits the multiplexed input signal into a first signal going toward filter 20-1 and fiber 113, and a second signal going toward filter 20-2 and switch 13) ;

routing the first partitioned multiplexed signal to the optical signal combiner 22-1 (on fiber 113); and

routing the second partitioned multiplexed signal to the photonic switch 13.

Regarding claim 3, Morthier discloses passing only the agile data signals to the photonic switch, thereby improving isolation in the switching node. Morthier discloses using filter 20-2 to pass only the signals that are meant to be switched to the switch element 13 (column 12, lines 19-30).

Regarding claims 4 and 5, Morthier discloses blocking the plurality of data signals received at the photonic switch (using filter 20-2) and subsequently enabling the agile data

Art Unit: 2633

signals to traverse the photonic switch by suppressing data signals other than the agile data signals within the photonic switch, thereby improving isolation in the switching node (column 12, lines 19-30).

Regarding claim 6, Morthier discloses providing a second signal splitter 21-2 at a second input of the network switching node, and adapting the photonic switch 13 to receive a second optical multiplexed signal from the second signal splitter (see Figure 4A).

Regarding claim 7, Morthier discloses providing a second signal combiner 22-2 at a second output of the network switching node and adapting the signal combiner to receive a third optical multiplexed signal from the photonic switch (see Figure 4A).

***Allowable Subject Matter***

8. Claims 8-16, 18, and 19 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

The prior art, including Milton et al. and Morthier, does not specifically disclose or fairly suggest an agile switching node with the specific combination of all the elements and limitations as recited in claim 8 or claim 18, particularly including an optical signal splitter for splitting an optical multiplexed signal into first and second partitioned multiplexed signals; an optical add/drop multiplexer receiving the first portioned signal from the splitter and selectively adding/dropping signals in the first partitioned signal; a photonic switch receiving the second portioned signal from the splitter and switching the agile data signals, and an optical signal combiner for receiving and combining the signals from the add/drop multiplexer and the photonic switch.

Art Unit: 2633

*Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023.

The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christina Y Leung  
Christina Y Leung  
Patent Examiner  
Art Unit 2633